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CHINA AND THE SARS EXPERIENCE

HOW THE FIRST DISEASE OF THE 21ST CENTURY PROPELLED A NATION FORWARD.

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In the Spring of 2003, Severe Acute Respiratory Syndrome ripped through China and the world. What it left behind in China was a country greatly improved in terms of social health levels, political transparency, financial stability and quality of life. From an ability to handle future crises and increase in international investor quality, China emerged intact, and improved. This paper outlines the disease, chronology of the outbreak, China's behaviour throughout and argues that global forces once blamed for the outbreak actually should be credited with its eventual control, and that the experience propelled China into the 21st century.

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1. INTRODUCTION

The right to rule in China is guided by a subconscious political belief that is commonly referred to as the “Mandate of Heaven”. This self-fulfilling ideology states that the powers that rule do so only because heaven has wished it so. The regime’s rise to power, stronghold over the people, and possible demise are all events dictated by the whims of Heaven. If a government successfully repels domestic and foreign challenges in the form of war, drought, famine, or disease – then it is because they were meant to do so. And with each successful call to the challenge, the belief in the authority of the Chinese regime is entrenched.

Officially, this political philosophy is antiquated, archaic and by all means irrelevant. But still as applicable today as in the days of the Yellow Emperor, Confucius, or Mao Zedong. The Communist government that steers modern-day China approached the SARS outbreak with their tried and true style of denial, containment, propaganda, and ultimately blame. Few modern day thinkers would encourage any government to employ such tactics when dealing with their demos, but in China, the government is the people, not the other way around. Fortunately, for all parties involved, the “Chinese Way” to handling any crises resulted in a strengthened government, increased foreign trust, improved communication, deeper civil and political rights, and most importantly, a far healthier country.

The fact is that China is far better prepared to handle a domestic or international crisis today than at any time in contemporary history. In the political sphere, the government has learned the lessons that SARS was positioned to teach. But this is not why China is far better off today. China’s improvement comes from the result of mass social health campaigns that practically demanded that the people of China refrain from highly unhealthy practises and embrace the absolute basics of sanitation. It is really no exaggeration to declare that practically overnight, the people of China stopped spitting on the streets, or eating extremely exotic and dangerous dishes, and started to wash their hands, prepare food in clean kitchens and be more mindful of the potential health consequences of their actions.

The death toll of SARS is undeniable. Hundreds died in dozens of countries. But the country that was hit the hardest has now started to benefit from an unprecedented leap forward in terms of sanitation and public health. When SARS was at its worst, the government sent down a decree to wash one’s hands and refrain from sneezing on one’s neighbour. This coincided with a very public dismissal of top-level officials who were very much in the wrong, and a number of highly transparent moves to usher in a new era of international cooperation. A few months later,

SARS was yesterday's news. The disease was under control, the World Health Organisation and health community at large had identified, cooperated and isolated a potential pandemic against all odds, and the faith in the government, the people of China so reluctantly express, was restored.

This paper will set out to accomplish three goals. Firstly, to outline the nature, course and history of the Severe Acute Respiratory Syndrome outbreak. It will examine how this epidemic unfolded both within the borders of China as well as in the larger scope of the international arena. More than simply listing the chronology of SARS, this paper will explain the backdrop necessary for understanding the SARS experience from a variety of perspectives. Secondly, a scrutiny of the Chinese government throughout the SARS outbreak will show that not only did China act in a most predictable fashion during the onset of SARS, a reversal of typical Chinese behaviour led to the successful containment of the first globally threatening pandemic of the 21st century. Finally, by detailing life in China four years after the arrival of SARS, this paper will argue that the China that remains is populated with a wiser, healthier and far stronger population than was thought imaginable.

1.1. RESEARCH QUESTION

A critical theory analysis of China's rather recent and unprecedented economic development would argue that SARS arose as a result of unrestricted growth and that there are unforeseen social dangers in investing too much faith in modernist theories. Critics of China's mode of development will argue that SARS was a direct result of too much development taking place over too short of time. But, their arguments are based on the assumption that SARS was a negative experience for China and the Chinese people. Rather than looking at what forces led to the appearance of SARS, this paper will examine China following the event, and will explicitly conclude that China's SARS experience was an entirely positive one.

1.2. WHY STUDY SARS

The study of epidemics is an interesting subject for a number of potential reasons. For obvious ones, it can be examined through a purely scientific or medical perspective. One only needs to sift through the mountains of papers and reports to understand that the international scientific community left no stone unturned. The discussion can simply contain itself to the fields of biochemistry or epidemiology if need be (Sampathkumar, Temesgen, Smith and Thompson

2003). On the other hand, it is also possible to examine SARS within the context of international trade or tourism, or it can be studied from a macro- or microeconomic point of view (Lee and Warwick 2004). The subject of the effect of SARS is also easily discussed in terms of soft and hard power issues and even military threats. It can be viewed in the context of geography, studying each region or country in isolation, or by terms of development, comparing how developed areas such as Singapore or Canada handled things differently than southern China or Vietnam (Benitz 2006, Brudon and Cheng 2006, Lambert 2006).

The point of departure for this paper is characterised by three elements. First of all, it is a political science paper in that it will argue that China gained decades of development – politically, socially, and medically – overnight. Issues of transparency, development, reform, and market forces will all play an important role in understanding the political nature of the SARS outbreak. Secondly, timing plays a great deal of importance in choosing SARS as a topic. By analysing the outbreak from the onset through four years after it emerged, clarity and objectivity will be attainable goals in attempting to absorb significant factors in the pandemic's emergence and ultimate spread to the far reaches of the globe. Finally, access to information plays the third important role in why SARS was chosen as a subject of study. After spending over three years in Shanghai, China, I believe I have a greater understanding of the nature of how China handles itself when domestic issues are in the spotlight of the international stage. Furthermore, the amount of information, as well as the forthright and honest answers given to SARS related queries allow for an insight otherwise unattainable in the context of more politically sensitive subjects.

1.3. THEORETICAL APPROACH: MODERNITY AND PUBLIC HEALTH

The framework for this paper was to conduct the research via theories of globalization and modernity. In a neo-liberal understanding of the concepts, globalization is a force that leads to development for all people, but placed before eager proponents of globalization is the truth that this same process exposes asymmetries in power and knowledge, and can lead to dangerous cultural, political, and economic imbalances. The concept of globalization is a process that involves the increase in scale of global movements, an increase in speed, as well as an increase in cognition (Kinnvall and Jönsson 2002). None of these elements were the cause of the emergence of SARS, but were in fact the reason for its rapid global spread. More importantly though, modern processes designed to increase the speed of communication should be given the lion's share of credit for the ultimate control of SARS.

A modernity approach may at first feel to be a strange filter to apply when analysing SARS or social health policy in general. Modernism is the theory by which China has guided its climb towards development – to an almost perverse level. Over the last 50 years, China’s development policies have defined what modernity stands for, rather than modernity having defined China’s direction over these decades. By perusing any public literature published by the Chinese government for the sake of general consumption, even the most uninitiated reader will find it impossible to miss the arching sentiments that define Chinese policy – that development is good for China, and China is better off for having developed as quickly and as boldly as it has.

The theory of modernity has its roots in arguments found as far back as Machiavelli, and have been developed and honed by more recent theorists such as Leo Strauss. The understanding of this theory should be as follows:

1. Change and progression are good - especially within fields of technology and economics - and should be understood as such.
2. A positive attitude towards the foundations of democracy should also be combined with an openness towards political experimentation.
3. Despite the emergence of small communities, large states are superior.

Combining notions of globalization and modernity, one is left with the following theoretical understanding: an increase in the movement of goods, capital, people, and information among formerly separate areas are necessary elements for the development and progression of humanity.

It follows then that any criticism of China’s policies are a criticism of modernity itself – which firmly believes that traditionalism is suffocating and dangerous and all that is new and that derives from progression and technology is beautiful and good. Even theorists who find positive gains in China’s recent past but feel uncomfortable with putting too much stock into modernism have encouraged us to applaud China for its gains by judging China against its own measuring stick – a theoretical approach called Cultural Relativism. But the facts remain – China has made great progress over the last half century, through folly and wisdom, and the group who has benefited the most has been the Chinese people.

1.4. CHALLENGES TO STUDYING SARS

The starting point of this research is to conduct a deconstructive historical overview of the entire SARS outbreak. A chronology will be outlined highlighting both significant domestic and international events in order to answer two simple questions: How did the SARS epidemic start, and how did it finally come to a conclusion? This detailed overview will provide an objective source of information for understanding the crucial turning points in this particular outbreak.

Studying an epidemic in China creates a special set of circumstances which are both overtly challenging and surprisingly encouraging. To begin with, this research will not overlook the “China Factor” which tends to warp traditional questions and blur otherwise clear parameters. The very fact that the Chinese political system is clouded in mystery and secrecy makes it difficult to come to any certain conclusions regarding the behaviour of the Chinese government. However, SARS provides us with a rare moment of political transparency otherwise non-existent in terms of how the government operates. Not only was the Chinese politburo publicly re-arranged, but praise was given to news sources that were candid in the critique of government inaction. This unique context will be referred to as the “China Factor” throughout my research, and will hopefully deal with unique Chinese characteristics from “losing face”¹ to the vertical and horizontal nature of the Chinese bureaucracy².

A second context is important in understanding the outbreak of SARS, and that is the context of economic growth that China is experiencing as a result of their neo-liberal transformation. The role of privatisation in China has dire consequences on the state of the domestic health care system. Furthermore, decades of applying a Kuznet’s curve approach to developing – putting growing pains aside in exchange for the hope that future economic might will provide an ailment to those pains – has taught China to more or less ignore developmental “speed bumps”. This transition from public to private has created a new set of challenges which face both the Chinese government and people, and should not be ignored in the overall study regarding the outbreak of SARS in China.

¹ Yau-fai Ho, David. “On the Concept of Face” *The American Journal of Sociology*. Vol. 81, No. 4. January 1976. Pg. 867-884.

² Chen, Jianfu. “Implementation of Law as a Politico-Legal Battle in China”. *China Perspectives*. No. 43. September/October 2002.

1.5. METHODOLOGY

The nature of this research was entirely qualitative. Although quantitative data is used in cases referring to occurrences and frequencies of SARS cases both in China and worldwide, this empirical information was not directly used to ascertain which factors were most crucial in the handling of the SARS epidemic. Since this research deals with the study of China's actions and interpreting them as a form of behaviour, truly only a qualitative approach is appropriate³.

The start of this paper outlines how the SARS epidemic broke out, and how it was finally resolved. Therefore, much of the research methodology utilised relied on secondary sources such as academic and newspaper articles, as well as public data to create a full and outlined understanding. Furthermore, much reading of articles and other sources was necessary to have gained any functioning understanding of epidemiology. Due to the nature that SARS was a very recent and highly public issue, internet sources were used throughout, especially since several respected news sources have created entire internet-based special reports devoted to this subject⁴.

Qualitative research is mostly multi-method in focus⁵ and therefore a number of information gathering techniques were used depending on the resources available and challenges faced. While in China, field work mostly involved dozens of informal interviews with co-workers, business leaders, friends, doctors, students, hotel staff and tourists. These actors were questioned on how they characterised the effect that SARS had on their daily life – and whether they felt the situation in China has changed for the better or worse. The interviewing format was semi-structured yet open and flexible, ranging from one-on-one meetings to group discussions. It should be stressed that the bulk of conclusions came from the direct observations of three years of living, travelling, working and surviving in China. Such observation of how society in China has been altered as a result of SARS was key in understanding the subtle nuances behind this particular epidemic and how it was dealt with.

³ Alvesson & Skölberg, Pg. 4.

⁴ For example, CNN's "SARS: Special Report", TIME Asia's "Unmasking a Crisis", and CBC's "Indepth: SARS".

⁵ Denzin, Norman & Lincoln, Yvonna. *The Handbook of Qualitative Research*. Sage Publications. 2000. Pg. 5.

2. THE DISEASE

2.1. THE PANIC

Much of the fight against SARS, although few were aware of it, was understanding exactly what SARS was, where it came from, and the magnitude its threat posed. Thousands in the scientific community worked around the globe and around the clock, and often times, due to direct exposure to the virus, became a victim themselves. To date, volumes have been written about SARS, and this massive amount of knowledge is a direct result of their efforts.

In conducting research about the epidemic four years after it took the world by storm, one glaring question remains. Why was SARS ever considered such a threat? It originally appeared in China's southern province of Guangdong and for weeks was simply treated as cases of atypical pneumonia. Even after it spread throughout China, and into neighbouring countries, it was still a respiratory illness. Tuberculosis, on the other hand, is another respiratory disease that manages to kill 700 people a day in China, but this hardly makes the headlines. In what way was SARS so different that the world was thrown into a state of near emergency?

One explanation is the culture of fear that emerged following the September 11th attacks on New York. American and other state officials set about warning their citizens that future threats were only a matter of when and where. The threat of a virus emerging that was so deadly it had no cure was a possibility that was very real in the mind of the world citizen. When SARS first emerged, every characteristic it exhibited suggested that this was not just *a* super-virus, but perhaps *the* super-virus. The description of the disease offered by the World Health Organisation (WHO), the pre-eminent organisation entrusted to research, manage and control outbreaks clearly illustrates why SARS was not something to be taken lightly.

SARS needs to be regarded as a particularly serious threat for several reasons. The disease has no vaccine and no treatment, forcing health authorities to resort to control tools dating back to the earliest days of empirical microbiology: isolation and quarantine. The virus comes from a family notorious for its frequent mutations, raising important questions about the future evolution of outbreaks and prospects for vaccine development.

All available diagnostic tests have important limitations. If tests are poorly conducted or results wrongly applied, patients excreting virus and thus capable of infecting others can slip through the safety net of isolation and infection control. The disease continues to show a disturbing concentration in previously healthy hospital staff – the human resource vital to control. A significant proportion of patients require intensive care, thus adding to the

considerable strain on hospital and health care systems. Evidence is mounting that certain source cases make a special contribution to rapid spread of infection. The maximum incubation period, currently estimated at 10 days, allows spread via air travel between any two cities in the world.

WHO's most recent analysis estimates overall case fatality in the range of 14% to 15%. In persons over the age of 65, the case fatality ratio can exceed 50%.⁶

This publication clearly illustrates why this epidemic was being taken very seriously, and why research centres around the world were literally racing against time to find out as much as possible about this new and terrifying disease. Much of what we understand about the disease today comes from their hard work.

2.2. WHAT IS SARS?

SARS is an atypical pneumonia that presents itself with influenza-like symptoms, such as fever, myalgias⁷, and headache. Fever occurs in nearly all patients and is often the earliest presenting symptom⁸. After 2 to 4 days of incubation, patients often begin to suffer from a dry, unproductive cough. This may progress to a shortness of breath, usually in the second week of the illness, and might be accompanied by low blood oxygen levels. After 10 days, SARS is considered fully incubated, and patients face death as a result. The overall fatality rate is 3% to 12% depending on the region and age. For patients above 60 years of age, and already suffering from a prior illness such as diabetes, the fatality rate was as high as 50%⁹. To put this mortality rate into perspective, the 1918 Influenza outbreak that killed 40 million people had a mortality rate of 2.8%¹⁰.

It is now known for certain that SARS originally emerged in China's Guangdong Province around the first two weeks of November, 2002. It has been generally agreed upon it jumped the species barrier to humans from a small wild animal of the region, likely a raccoon-dog¹¹ or masked palm civet cat¹². The civet cat is a delicacy in southern China for the belief that consumption of this small mammal will improve health and complexion. The sale, purchase and consumption of

⁶ WHO-1. Pg 5. WHO Report. "Severe Acute Respiratory Syndrome (SARS): Status of the outbreak and lessons for the immediate future" Geneva, May 20, 2003. CDS Information Resource Centre. Full report available for download at: www.who.int/csr/media/sars_wha.pdf

⁷ Muscle Pain or fatigue

⁸ Sampathkumar, Temesgen, Smith and Thompson. "SARS: Epidemiology, Clinical Presentation, Management, and Infection Control Measures" *Mayo Clinical Proceedings*. July 2003; Vol 78. pg 884.

⁹ Ibid pg 884.

¹⁰ File, Boyer, Erme, and Myers. "What you need to know about SARS" *Ohio Journal of Science*. Vol 103. Pg 70.

¹¹ "Situation in Toronto, detection of SARS-like virus in wild animals." WHO Update 64 - May 23, 2003. www.who.int/csr/don/2003_05_23b/en/

¹² Rowland, Robin. "Indepth: SARS. Civet Cat" CBC News online. May 23, 2003. Accessed summer 2005. <http://www.cbc.ca/news/background/sars/civetcat.html>

the civet cat was banned by Chinese authorities in November of 2004 after evidence of this animal being linked to SARS emerged¹³.

SARS is believed to be caused by the coronavirus SARS-CoV. It was first isolated in 1937 from chickens and is believed to be the agent for the common cold (rhinovirus) in roughly 50% of cases. There are roughly 15 species in this family of virus, being grouped into 3 categories. The SARS coronavirus is still ungrouped¹⁴. They are transmitted by aerosols of respiratory secretions, by the faecal-oral route, and by mechanical transmission¹⁵. Most virus growth occurs in epithelial cells¹⁶.

A unique characteristic of the outbreak of SARS was that it was the first international health threat of the 21st century, was identified by modern methods, but treated using 19th century techniques: isolation of known cases, and quarantine of suspected cases. The most successful treatment of the disease was in the original Guangdong province and in Viet Nam – two areas not particularly well known for a cutting-edge approach to medicine. Dr. Zhong Nanshan, who was working at the Guangzhou Institute of Respiratory Diseases throughout the entire outbreak, described their treatment as prescribing steroids, antibiotics and face masks¹⁷. During the SARS epidemic in Guangdong, 1512 people were infected, and 58 deaths occurred, with a case fatality rate of 3.8%, which ranked as the lowest in the world¹⁸.

2.3. TESTING FOR SARS

Initial symptoms of those infected with SARS are very flu-like in nature. In fact it was first treated and recorded as atypical pneumonia throughout the initial stages of its outbreak. The signs included fever, myalgia¹⁹, lethargy, coughing, a sore throat and other non-specific symptoms. Detecting whether a patient was actually infected with SARS was tricky to say the least, and had several medical and political drawbacks. One method that emerged tested for the presence of SARS antibodies in the system, but was an effective method only after 21 days of incubation – which posed obvious drawbacks. A second test could also detect antibodies after only 10 days of incubation but was more labour and cost intensive and impractical for countries already at mercy to an under funded health care system. The final test that emerged is known as a PCR test which can

¹³ "China bans cooking of civet cat to prevent SARS" China Daily. November 11, 2004.

¹⁴ University of Leicester Faculty of Medicine & Biological Studies, Microbiology Department. <http://www-micro.msb.le.ac.uk/3035/Coronaviruses.html>

¹⁵ Ibid.

¹⁶ Epithelial cells are responsible for secretion, absorption and protection. They line the inside of our lungs, the gastrointestinal tract, the reproductive and urinary tracts, and make up the exocrine and endocrine glands.

¹⁷ Zhong Nanshan "Management and prevention of SARS in China" *Royal Society Publications*. June 2, 2004. pg 1115.

¹⁸ Ibid.

¹⁹ Muscle pain. Usually associated with viral infections.

detect genetic material of the SARS virus in blood, sputum, tissue samples and stool. These tests are very specific but not particularly sensitive, meaning it will not for certain detect if a sick patient suffers from SARS, but a negative test does not necessarily mean they do not have SARS²⁰.

Diagnosing patients with SARS became a slippery slope. First of all, it was difficult to make any certain conclusions for up to 3 weeks of incubation, but by this time the patient could be completely recovered, or have passed away. Secondly, the most accurate test available, the PCR test, was prone to false negatives. Thirdly, patients who died from SARS could still be considered a “suspect” case unless a biopsy is conducted. According to the WHO, patients suffering from atypical pneumonic should *not* be reported as a SARS patient unless two of the three available tests are positive, and have been shown to have spent significant time in a SARS infected area²¹.

The main drawbacks in testing for SARS and reporting SARS patients were the time, expense and reliability of testing. However, there also posed a more important political threat. Countries that had high numbers of SARS cases such as China, Singapore and Canada suffered dearly from the loss of tourism and investments. Some authors have even made the assertion that China encouraged Shanghai to treat all atypical pneumonia patients as simply that, and avoid conclusively diagnosing these patients as suffering from SARS. In fact Professor Lynn T. White of Princeton asserts the political ramifications of such diagnostic methods went even further.

At least through mid-May 2003, the report data on SARS from Shanghai were lies (if those from elsewhere in China were true), because national standards for defining the disease were waived in that city. Shanghai is so important in terms of state revenues, it was allowed to avoid confirming a patient has having SARS until definite contact with a previously confirmed victim of the disease was established. A person on a death bed in Shanghai might clearly have atypical pneumonia, but would not be counted as having SARS until the place, time, and mode of transmission were recorded.

²⁰ "Use of laboratory methods for SARS diagnosis" WHO Publication. <http://www.who.int/csr/sars/labmethods/en/#lab>

²¹ "Case Definitions for Surveillance of Severe Acute Respirator Syndrome (SARS)" WHO Publication. <http://www.who.int/csr/sars/casedefinition/en/>

3. THE OUTBREAK

3.1. THE START

It is with purpose that this paper has already introduced elements such as the panic related to SARS, and the extreme difficulty in diagnosing the disease. These elements were part of the disease – for the fear of the unknown was by far the most powerful effect SARS had on the world. It adds to the gravity of the outbreak of SARS to understand that at one time in 2003, SARS represented the super-virus destined to surpass the plague in terms of mortal devastation. It emerged from a country famous for its immeasurable dislike for international meddling in domestic affairs, and from a region widely known for its unsanitary conditions and ability to incubate epidemics. It was a disease no one had seen, but was quickly recognised of having the ability for transferring from human to human. And, it was devastatingly lethal. The mortality rate was between 3% and 12% and due to the “super-spreader” element and recognition for quick travel, organisations such as the WHO originally put potential deaths in the hundreds of millions. Without a clear idea of what everyone believed SARS would eventually become, it is hard to appreciate how terribly it was originally handled.

Initial cases of SARS emerged in the city of Foshan, Guangdong, around the month of November, 2002²². At this time, it was an unknown disease. Dr. Zhong describes the beginning in simple terms, stating “at that time, we had no knowledge of the disease and diagnosed it as pneumonia with an unknown cause.”²³ The first officially reported case was not made until January 23rd – a report made by the Guangdong Government to Beijing that was not widely circulated and not delivered to the World Health Organisation. In fact, these first cases were considered ‘top secret’ under Chinese law, thus making it unlawful to discuss with or deliver to any news agency of any kind. The first time the public in general heard of SARS was when discussions of the disease started to appear on the internet²⁴.

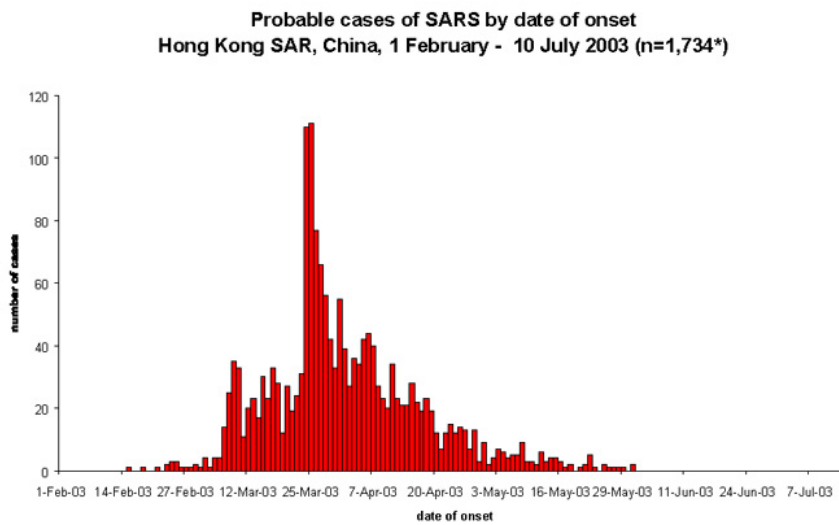
SARS became serious on February 21, 2003, when a Chinese physician from the Guangdong province who cared for patients with pneumonia and had himself developed symptoms travelled to Hong Kong to visit relatives. He stayed on the 9th floor of Hotel Metropole, infecting a known 20

²² Fidler, David. “SARS, Governance and the Globalization of Disease”. Palgrave Macmillan. 2004. pg. 73.

²³ Zhong Nanshan “Management and prevention of SARS in China” *Royal Society Publications*. June 2, 2004. pg 1115.

²⁴ “A Mystery Illness Spreads In Asia, and So Does Fear” Wall Street Journal, March 28, 2003.
<http://www.ph.ucla.edu/epi/bioter/mysteryillnessfear.html>

individuals. The following graph indicates when he appeared in Hong Kong, and the subsequent number of cases in Hong Kong and China.



* As of 10 July 2003, 21 additional probable cases of SARS have been reported from Hong Kong SAR, China, for whom no dates of onset are currently available.
 Source: Department of Health, Hong Kong Special Administrative Region of China

Source: World Health Organisation. Epidemic and Pandemic Alert Responses. Epidemic Curves: SARS.
<http://www.who.int/csr/sars/epicurve/epiindex/en/index4.html>

3.2. THE SUPER SPREADER

It is very important to understand the underlying reason as to why SARS was considered terrifying: it was believed to be highly contagious. More so than any disease previously seen. This was believed for two reasons. Firstly that SARS could live in a number of plentiful host environments, and although known to be transmitted via droplets, data also suggested that the virus could remain viable for considerable periods on dry surfaces – up to 24 hours – increasing the chance that SARS would be transmitted through inanimate objects²⁵.

When studying the severity of an epidemic, four factors should be examined: the agent, the transmission method, the host, and the environment²⁶. In terms of transmission, there are two methods: direct and indirect, with indirect being the far more dangerous. Therefore, the second reason SARS was taken so seriously was the element of the “super-spreader”, or an agent who could spread the disease via airborne transmission to more than one other host. The physician who stayed in the Hong Kong hotel was considered the first. This is not typical for airborne diseases – in many instances, the disease kills its host before a high level of transmission occurs – commonly

²⁵ Sampathkumar, Temesgen, Smith and Thompson. “SARS: Epidemiology, Clinical Presentation, Management, and Infection Control Measures” *Mayo Clinical Proceedings*. July 2003; Vol 78. pg 885.

²⁶ Beaglehole, Bonita, and Kjellström. *Basic Epidemiology*. World Health Organization Publication. 1993. Pg 97-102.

known as “burning” – which was the case in the 1854 outbreak of Cholera in London, or the world flu pandemic of 1914. With SARS, the perfect disease appeared. Symptoms appeared late into incubation, and were flu-like – so spreaders were unaware of their actions. It was spread through contact or indirectly, and via droplets or by inanimate objects. And, it created “super-spreaders” – people who are “full of the virus” and are capable of infecting a large pool of people²⁷.

With our current understanding of the SARS virus, it is easy to appreciate the gravity of yet another super-spreader incident. A patient with SARS who had diarrhoea stayed with his brother in an apartment building in Hong Kong. Within this building was a leaky sewage drain, and while the patient was staying there, sewage also backed into bathroom floor drains in many apartments. It is now known that the SARS-CoV virus is stable in feces and urine at room temperature for up to 2 days, and even more stable (up to 4 days) in stool from patients with diarrhoea. Over 300 subsequent cases have been attributed to this particular super-spreader²⁸.

The super-spreader that arguable caused the most alarm on a global level was the case of an airline stewardess who, following her death, was linked to over 100 cases²⁹. By inadvertently transmitting the disease while working on various flights, she quickly spread the disease to the four corners of the globe – from Canada to South Africa, to Iceland and Finland. At the time of her demise, reports were just starting to filter into the WHO, but within 2 months, 623 deaths had been recorded in 28 countries.

3.3. THE APRIL 20 U-TURN

By the beginning of April 2003, things were coming to a head. Cases were being reported around the globe and it was widely accepted that SARS had emerged in southern China. At this time, two widely circulated articles were published in daily newspapers. The first was Elisabeth Rosenthal’s article “A Beijing Doctor Questions Data on Illness” which appeared in the New York Times on April 10th. At the time of publishing the Chinese government had just changed their tune – from officially and repeatedly stating that there were no cases of SARS in Beijing, to admitting that the city had 12 cases and 3 deaths. When hearing this announcement, the SARS “whistleblower” emerged. This whistleblower was Dr. Jiang Yanyong who was at that time working at the People’s Liberation Army No. 309 Hospital, where, by Dr. Jiang’s count there were 60 SARS patients and 7 deaths from the disease. Dr. Jiang then did the unthinkable – especially

²⁷ Leung & Ooi. *SARS War: Combating the Disease* World Scientific Publishing Company 2003. Pg 123-124.

²⁸ Sampathkumar, Temesgen, Smith and Thompson. “SARS: Epidemiology, Clinical Presentation, Management, and Infection Control Measures” *Mayo Clinical Proceedings*. July 2003; Vol 78. pg 885.

²⁹ WHO-1. Pg 6. WHO Report. “Severe Acute Respiratory Syndrome (SARS): Status of the outbreak and lessons for the immediate future” Geneva, May 20, 2003. CDS Information Resource Centre. Full report available for download at: www.who.int/csr/media/sars_wha.pdf

considering that the Chinese Ministry of Health had forbidden doctors to publicise the fact that SARS was in Beijing “in order to ensure stability”³⁰. Dr. Jiang sent emails to the Central TV network in Beijing, and to Phoenix TV in Hong Kong reporting at least 100 cases³¹. Jiang’s disclosures triggered off greater international pressure and eventually forced the top leadership to take much more active interest in the SARS outbreak.

Soon thereafter, an article appeared in *Business Week* by a respected reporter, and Hong Kong resident, Mark Clifford entitled “China’s Deadliest Plague: Authoritarianism”. This article drove straight to heart of the matter of China’s mishandling by blaming both China, and the world for accepting China’s behaviour: “SARS has laid bare some ugly truths about a country the world desperately wants to see succeed - (that) the attitudes of China’s overweening government officials haven’t changed, (and) that China has no transformation strategy when it comes to its political development”³². These views were starting to find a receptive (and global) audience, and the Chinese government knew it had to step onto the stage of transparency.

By April 20, the Chinese government made the decision that to continue to cover up the realities of SARS would create more damage than to come clean. The complete 180 degree change in attitude was stunning, and marked the most pivotal turning point in the combating of SARS. It was so dramatic, that almost overnight China’s mistakes (which will be discussed in detail later) were practically forgiven.

On this date, the Chinese health minister and mayor of Beijing were fired, ostensibly for policy failures, and the media and party were explicitly ordered to be absolutely transparent on all matters relating to SARS³³. Vice Premier Wu Yi was appointed to the position of Health Minister, and Wang Qishan was brought in as Beijing’s Mayor – both highly regarded as members of the group of skilled, tough, and smart officials associated with recently retired Premier Zhu Rongji³⁴. To illustrate China’s new approach to combating SARS, Wu Yi immediately headed to Tianjin to examine SARS prevention measures. Once there, she dialled the 120 SARS hotline to see whether the system was functional. Upon receiving no answer, she publicly insulted the local party secretary in a most transparent and widely reported-on fashion³⁵.

³⁰ Rosenthal, Elisabeth. “A Beijing Doctor Questions Data on Illness” *New York Times*. April 10, 2003.

³¹ White, Lynn T “SARS, Anti-Populism, and Elite Lies: Temporary Disorders in China” *The New Global Threat: Severe Acute Respiratory Syndrome and its Impacts*. World Scientific Publishing Co. 2003. pg 45.

³² Clifford, Mark “China’s Deadliest Plague: Authoritarianism” *BusinessWeek Online*. April 18, 2003.

³³ McNally, Christopher “Baptism by Storm: The SARS Crisis’ Imprint on China’s New Leadership” *The New Global Threat: Severe Acute Respiratory Syndrome and its Impacts*. World Scientific Publishing Co. 2003. pg 73.

³⁴ Jacques deLisle *SARS, Greater China, and the Pathologies of Globalization and Transition*. Foreign Policy Research Institute – Orbis Publication. Fall 2003. Pg 596.

³⁵ Pomfret, John. “In Crisis, China Turns to a Familiar Face” *Washington Post*. May 6, 2003, p. A17.

The weeks thereafter produced further unprecedented behaviour on the part of the Chinese government. In one instance, a special hospital for SARS patients, the Xiaotangshan Hospital was built in less than 10 days and was staffed with over 1000 military doctors the first day it opened. Within days, the hospital was accommodating a recorded 3000 infected persons³⁶. Although China had turned the corner, and this point will be examined further in this paper, the fact was that SARS was still unidentified, out of control, and projected to be the greatest pandemic the world had ever seen.

3.4. THE PEAK

In April of 2003, SARS was being taken most seriously for two reasons: the loss of human life, as well as the incredible economic impact the outbreak was causing. Initial economic forecasts related to SARS were bleak – the Asian Development Bank made a preliminary estimate that SARS could cost Asia \$28 billion³⁷: 4 percent of total GDP in Hong Kong, approximately 2 percent in Taiwan and Singapore, and 0.5 percent in China³⁸. However, evidence points to the fact that the economic losses connected to SARS were different than other industries affected by disaster – for example, the way the travel industry was hit post-September 11th. SARS simply put business on hold, and the supply chains affected were never broken, they just experienced a pause. Within months of the SARS outbreak, it was business as usual – occupancy rates were up again, and business deals that were put on hold were brought back to life.

This economic experience resulted in a windfall for China. SARS was China's 30 billion dollar punch in the stomach, but it did not crumble from the blow. Instead, it should the world that it could take an economic beating, and remain standing. The 1997 Asian Economic Crises crippled many economies in the region – such as Thailand – but left China unscathed. Yet, for years afterwards, analysts believed that this was China's fluke, and remained weary about China as a safe economic bet. China's weathering of the SARS economic storm proved to them that China indeed offered a strong market for foreign investment, and the influx of capital into China post-SARS is bewildering.

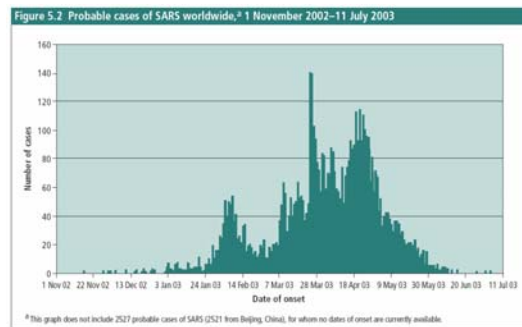
In terms of mortality, the projections at this time were estimated to be in the hundreds of millions. Cases were being reported at an alarming rate, and this was at a time when numbers were deemed to be reliable. The graph below illustrates the variance of cases, and when they were

³⁶ Zheng Yongnian and Lye Liang Fook "SARS and China's Political System" *The SARS Epidemic: Challenges to China's Crisis Management*. World Scientific Publishing Co. 2004. Pg 64.

³⁷ Their estimates were eerily accurate – many sources today put the total economic cost at 30 billion

³⁸ White, Lynn T "SARS, Anti-Populism, and Elite Lies: Temporary Disorders in China" *The New Global Threat: Severe Acute Respiratory Syndrome and its Impacts*. World Scientific Publishing Co. 2003. pg 45.

reported. However, it is important to look at this graph through the eyes of how much the world knew about SARS at the time. These numbers were compiled after SARS had been successfully contained. By mid April, few of the numbers from before had been reported. By the time the world felt China was acting transparently and numbers were coming into the WHO from all countries accurately and regularly, observers began to sense that SARS was only just taking off. In hindsight, this time luckily happened to be when SARS was finally getting under control.



Source: World Health Organization "The World Health Report: 2003"

On March 12, 2003 the WHO issued an unprecedented global health alert for SARS – and this date now effectively represents the start of the peak period of the SARS outbreak. On April 2, WHO went one step further and for the first time in the agency’s history, it issued a travel advisory recommending the postponement of all but essential travel to Hong Kong and China’s Guangdong province³⁹. This headline-catching behaviour was the WHO’s way of getting the message out to the world: that if SARS wasn’t to be taken seriously, then no place on earth would be safe. For the next 4 months the SARS epidemic gripped the world. It wasn’t until July 2 that SARS was widely recognized as completely under control. It was on this date that Toronto was removed from the WHO’s list of areas with local transmission. A few days later, on July 5, the WHO announced that Taiwan, where the last known probable case of SARS had been isolated 20 days earlier, had broken the chains of human-to-human transmission⁴⁰.



Source: World Health Organization "The World Health Report: 2003"

³⁹ “Learning from SARS: Renewal of Public Health in Canada” A Report of the National Advisory Committee on SARS and Public Health. Health Canada Publications. October 2003. pg. 202.

⁴⁰ “The World Health Report, 2003: Shaping the Future” A World Health Organization Publication. 2003. Pg. 78.

3.5. THE CONTROL

The underlining point behind the super-spreader element, the speed and intensity of the outbreak, as well as the foolish initial mishandling, and later successful management is summed up well with the sentiment that “SARS spread rapidly along the pathways created by globalization.”⁴¹ This left the world with the feeling that the ease of movement of goods and people would inevitably bring about another September 11th, another Asian economic crisis, or another SARS. But as quick as some were to point the finger in globalizations direction as the cause of SARS, it is far more justified to attribute the control of SARS to the same global mechanisms. As well stated in the WHO’s 2003 World Health Report: “The SARS response depended on collaboration of the world’s top public health and laboratory experts, and took advantage of up-to-date communication technologies, including the Internet and video and telephone conferencing.”

The containment of the SARS outbreak should be attributed to 3 overriding factors: technology, political will, and education. Recent improvements in areas of communication and information sharing allowed for unprecedented cooperation throughout the efforts to identify the SARS germ. One example was the Canadian Global Public Health Intelligence Network (GPHIN), a worldwide web-crawling computer application used by WHO since 1997, that systematically searches for keywords in seven different languages to identify reports of what could be disease outbreaks. The data gathered by the GPHIN network was posted to the WHO’s SARS website on a daily basis – providing daily updates to keep the general public informed and to counter rumours with reliable information. This information quickly found its way into the hands of concerned citizens in all affected countries. As far back as early March, citizens took it upon themselves to spread information faster than SARS could spread itself. On March 15th, the CCP Propaganda Department ordered newspapers not to report the WHO’s first global warning about SARS. Emails and text messages spread this international report widely, even though China’s newspapers could not publish it⁴². This action was taken in the face of known dangers – not of the outbreak, but of the government. One month earlier, on February 10th, the news blackout led to the arrest of five people using text messages to spread rumours and information about the outbreak⁴³.

Technology also made it possible to identify the SARS virus in record time. It took scientists several years to isolate the HIV virus and to sequence its genome⁴⁴. One month after the

⁴¹ Jacques deLisle *SARS, Greater China, and the Pathologies of Globalization and Transition*. Foreign Policy Research Institute – Orbis Publication. Fall 2003. Pg 588.

⁴² White, Lynn T “SARS, Anti-Populism, and Elite Lies: Temporary Disorders in China” *The New Global Threat: Severe Acute Respiratory Syndrome and its Impacts*. World Scientific Publishing Co. 2003. pg 45.

⁴³ Michael Jen-Siu “Text Messaging Worries Authorities” *South China Morning Post Internet Edition*, February 19, 2003.

⁴⁴ Lam, Zhong, and Tan. “Overview on SARS in Asian and the World” *Respirology* 2008; 8. Pg S4.

laboratory network was established, participating scientists collectively announced conclusive identification of the SARS virus; complete sequencing of its RNA followed shortly after⁴⁵. Technology also played an important role in the process of screening international travellers for suspected cases of SARS – but this is still a contentious issue. In Canada, seven million passengers were screened, but not one case of SARS was detected⁴⁶. But one infamous incident tips the scale towards the general consensus that the screening was invaluable. A single flight from Hong Kong to Beijing on March 15th, generated 22 cases of SARS, and following the implementation of the WHO's recommended airport screening measures on March 27th, no further SARS cases were transmitted through such channels⁴⁷.

The second reason SARS was successfully brought under control was political will. In the face of immeasurable economic losses, governments around the world still took extreme steps to ensure their citizens avoided all unessential travel to areas of high risk. Today, the economic damage caused by the SARS outbreak is estimated to have been roughly 30 billion dollars⁴⁸. At the peak of the crisis governments were reeling from the impact – in March of 2003, aircraft movement at the Hong Kong International Airport plunged 49%⁴⁹, and the hotel occupancy rate dropped to 17%, as compared to 83% the year earlier⁵⁰. In some situations though, governments hoped for the best – in Guangzhou, the government refused to cancel its twice yearly Trade Fair schedule for April 15th of 2003. The year earlier, a record number of deals worth \$18.5 billion were signed by over 135,000 attendees. In 2003 only 8000 people made the trip to the fair⁵¹.

Nevertheless, in the face of increasingly mounting economic loss, governments put aside such worries and took the political steps necessary. These successes should be measured in not only actions taken, but actions not taken. For example, when the WHO issued travel advice directly to the general population, it was acting outside its mandate and this action could easily have been contended by each nation affected – but it wasn't. Governments stood aside and allowed a non-governmental organization to take the lead in terms of action, policy and education⁵². Later, at the World Health Assembly meeting in May 2003, the Member States of the WHO formally empowered it to take such actions in the future when necessary⁵³.

⁴⁵ "The World Health Report, 2003: Shaping the Future" A World Health Organization Publication. 2003. Pg. 80.

⁴⁶ CBC News online. "In-depth: SARS. Timeline" Last updated December 15, 2003. Accessed throughout 2004. www.cbc.ca/news/background/sars/timeline.html

⁴⁷ "The World Health Report, 2003: Shaping the Future" A World Health Organization Publication. 2003. Pg. 79.

⁴⁸ Xiong Lei "How Sars could save a nation" *NewStatesman*. January 1, 2005.

Clive Cookson "Sars legacy is blueprint for action on new diseases" *Financial Times*. July 30, 2005.

⁴⁹ Hong Kong International Airport. Civil international air transport movement of aircraft. Available from: www.cad.gov.hk/english/aircraft.html

⁵⁰ Lam, Zhong, and Tan. "Overview on SARS in Asian and the World" *Respirology* 2008; 8. Pg S3.

⁵¹ Forney, Mathew. "Silent for too long" *Time Magazine*. April 21, 2003

⁵² Fidler, David "Germs, governance, and global public health in the wake of SARS" *The Journal of Clinical Investigation*. Volume 113, Number 6, March 2004. Pg. 799.

⁵³ *Ibid*. Pg 802.

At the local level, there are hundreds of examples of political will which led to the ultimate control of the SARS outbreak. Measures included screening of passengers, involving the completion of questionnaires or sophisticated infrared equipment to screen passengers for fever⁵⁴. From April 30th in China, people taking boats, buses, trains, and airplanes were having their temperature checked. As a result, after this date, no exports of SARS virus between provinces were recorded⁵⁵.

The final mode by which SARS was finally stopped in its tracks was through education. In travelling throughout China to do research for this paper – it is the change in the levels of education that was most visible. The conditions first experienced in Baoding, China in 1997 were that of squalor, disdain and lack of education⁵⁶. Whereas today in many urban areas, signs are posted throughout public areas reminding citizens to refrain from spitting, avoid sneezing on others, and to wash their hands regularly. In countries where vaccines, hospitals, and doctors are in short supply, governments have no choice but to turn to methods of educating the public on making wise decisions – something that was done in great earnest throughout the SARS outbreak. These efforts of mass education also took place at the international level, through the WHO's effort to provide daily updates, and timely global alerts.

The results of the control of the SARS outbreak did not only stop an epidemic, but led to the saving of thousands of lives. In China, rural citizens are well out of reach of basic medical care, but as a result of the mass education campaign, they learned that a simple cough should not go ignored. Considering that China currently has 4.5 million cases of TB, with 1.45 million cases being identified each year, resulting in 130,000 deaths⁵⁷ – one can only begin to understand the positive net impact SARS has had on public health in China, and throughout the world. Furthermore, in the efforts to share the knowledge gained in the fight against SARS, scientists turned up two other new human coronaviruses that cause pneumonia in children and people with damaged immune systems⁵⁸. The result in terms of the overall level of public health in China and around the world, and the global citizen's level of relative education has been propelled forward immeasurably.

⁵⁴ Still in place at Shanghai's International PuDong airport as of Spring 2007.

⁵⁵ Balasegaram, and Schnur "China: from denial to mass mobilization" *SARS: How a global epidemic was stopped*. WHO Publications. 2006. pg 82.

⁵⁶ I first lived in Baoding, Hebei, China from 1997 to 1998 teaching at an The Hebei Provincial Agricultural University. Scenes of my students spitting on the floor during class, not washing their hands, or failing to clean food were daily occurrences.

⁵⁷ Leotsakos, and Spinaci "A review of evidence: China's path to better health and development" Published by the CMH Support Unit, World Health Organization. July 2004.

⁵⁸ Clive Cookson "Sars legacy is blueprint for action on new diseases" *Financial Times*. July 30, 2005.

4. THE BEHAVIOUR

4.1. THE UGLY

SARS is without question a result of terrible decisions made by the Chinese government long before the disease surfaced. In southern China, a combination of culture, economics, and missing policies led to the conditions necessary for the outbreak. The area of rural China in question is one in which a dense population exists among factories, terrible sanitation conditions, utter lack of basic health education, tropical climates, and a demand for exotic beasts which are sold in poorly-regulated markets⁵⁹. After it was discovered that SARS originated in both bat and civet-cats, one has to ask how such animals are hunted and sold, and what regulations must be missing in order to inhibit such business to operate.

The conditions of China's health system at the time SARS broke out must also be taken into question. In 1991 22.8%⁶⁰ of health costs were supplied by the central government, but by the year 2000, the government was only footing 14.9% - and overall medical costs rose from 4.1% of the GDP to 5.3%⁶¹. This translates to a situation where access to health was becoming more expensive, but the government was failing spectacularly to pay its share. Since 1995, the government's increase in spending in health and education rose an average of 14.2%, whereas total government revenue grew 17.5% annually during the same time. And since that investment includes education, this means any increase was likely going to impressive universities, rather than rural hospitals⁶². The situation to which SARS appeared was one where health costs had consistently risen over the decade, but the government had regularly and increasingly under-funded basic health needs.

The early mistakes are not easily connected to a singular event or decision made, but are better explained through an understanding of local party politics. As information started to surface about the new disease, local governments were more concerned about the affect any reduction in consumerism would have during the Chinese Lunar New Year⁶³. It is well known in the circles of

⁵⁹ Jacques deLisle *SARS, Greater China, and the Pathologies of Globalization and Transition*. Foreign Policy Research Institute – Orbis Publication. Fall 2003. Pg 594.

⁶⁰ Figures are a combination of both rural and urban spending. Separate figures were unavailable.

⁶¹ Xiong Lei "How Sars could save a nation" *NewStatesman*. January 1, 2005.

⁶² Leotsakos, and Spinaci "A review of evidence: China's path to better health and development" Published by the CMH Support Unit, World Health Organization. July 2004.

⁶³ McNally, Christopher "Baptism by Storm: The SARS Crisis' Imprint on China's New Leadership" *The New Global Threat: Severe Acute Respiratory Syndrome and its Impacts*. World Scientific Publishing Co. 2003. pg 72.

Chinese politics that local and provincial officials in China are evaluated on a variety of standards pertaining to the conditions of their localities, most of which emphasize economic development and social stability. Reporting openly on the outbreak of SARS in Guangdong would have affected foreign investment and international economic opportunities, a scenario akin to a nightmare for any local party official. In a climate where the norm is to not report any bad news, and transparency is discouraged, and at times punishable, the outbreak of any disease that requires the wide spread dissemination of information in order to realise any form of control would spell disaster.

In the 1990s, the government dissolved the collective health system and opted to allow market forces to dictate the future of health care. Such action has left behind a weakened rural health care system. Diseases such as Tuberculosis, AIDS, Neonatal Tetanus, Lead Poisoning, and Hepatitis B are high, even for a low-medium income country⁶⁴. Of all disease types that could challenge China's health and political system the gravest, it would be one of a respiratory nature. Not only is China blanketed in air pollution, it is also a country characterised by tobacco addiction. China has between 320 and 400 million smokers whose lungs have been weakened by their habit. This population accounts for 30% of the entire world's smokers⁶⁵. The scenario China found itself in was simple – local policy makers, many of them smokers, were rewarded on reports of improved conditions – and punished for any sign of malcontent. When SARS emerged, it was simply easier to distort reports of the disease than to make any initial efforts to eliminate it.

4.2. THE BAD

Decision-makers in China can not be wholly blamed for the situation they inherited, nor for the climate of politics which discouraged, or disallowed any form of transparency. The related elements to those conditions are ugly truths – not bad choices. But, that is not to say China did not make any short-sighted decisions in the initial days of SARS. In fact, this is where most attention is paid, since China acted foolishly, with utter contempt, and made decisions which directly led to the acceleration of the spread of SARS. China's bad choices occurred in three areas – locally, regionally, and internationally.

Local blunders that China committed are many and each was a result of a system that fostered such poor thinking. Even as the diseases was claiming victims on a daily rate, the state sponsored media provided citizens with information that was far from helpful. People's Daily affirmed that, under the "staunch leadership" of the Party Central Committee and "Comrade Hu

⁶⁴ White, Lynn T "SARS, Anti-Populism, and Elite Lies: Temporary Disorders in China" *The New Global Threat: Severe Acute Respiratory Syndrome and its Impacts*. World Scientific Publishing Co. 2003. pg 36.

⁶⁵ Leotsakos, and Spinaci "A review of evidence: China's path to better health and development" Published by the CMH Support Unit, World Health Organization. July 2004.

Jintao, the whole nation, united as one man...has struck up a heroic song featuring the Chinese people's strong will."⁶⁶ Instead of reporting the facts of SARS, even in early May, the media informed the people that the "strong and correct" Party leadership was the key to success – not basic measures to ensure sanitary conditions such as washing hands on a regular basis, and visiting a doctor if one fell ill. Instead, President Hu called for a "people's war" – a classic Mao-era phrase – against SARS⁶⁷.

China also failed to act responsibly in respect to the outbreak of SARS in Taiwan. As it is well-known, China fiercely defends its claim to sovereignty over Taiwan. A result of this policy has involved China opposing and blocking any formal or informal connections between Taiwan and any entity within the United Nations' system⁶⁸. As a result, Taiwan has had no contact or relationship with WHO since Taiwan lost its United Nations membership to China three decades ago, and this void was especially dangerous on the eve of the SARS outbreak. In early May of 2003, the SARS crisis in Taiwan was deepening, and Taiwan was asking for help. China was going out of its way to block WHO assistance, so the United States acted bilaterally in whatever capacity it could. Continued calls for WHO access to Taiwan become more compelling as a global public health problem loomed. The PRC finally consented for "humanitarian reasons" – to the WHO sending a team to Taiwan, but only under the condition that Taiwan desist from campaigning for a heightened status at the WHO – which was currently labelled as an "observer" (rather than member) and a "health entity" (rather than state). By holding Taiwan over the fire, China controlled the situation on their terms – and considered the outcome a great success⁶⁹. The downside was the loss of life in Taiwan as a result of China's initial stubbornness. At a time when lives were at stake – China was still childishly focused on regional politics:

"The Taiwanese authorities have again crashed to earth after their failure to gain World Health Organization (WHO) observer status, demonstrating that any attempt by the island to clutch at de facto independence will be destined to fail."⁷⁰

China has always insisted on playing the game of international politics as long as the rules are deeply entrenched in concept of bi- or multi-lateral relations at the state level. Any notion of "global governance"⁷¹ is firmly rebuked by the PRC and the ruling communist party therein – who have a long history of disallowing the participation of any non-governmental organizations in national and international political matters. Throughout the initial days of the outbreak, the

⁶⁶ "Promoting and Fostering National Spirit in Fight Against SARS," *People's Daily*, April 29, 2003.

http://english.peopledaily.com.cn/200304/29/eng20030429_116024.shtml

⁶⁷ "President Hu calls for 'People's War' Against SARS" *People's Daily*, May 2, 2003.

http://english.peopledaily.com.cn/200305/02/eng20030502_116147.shtml

⁶⁸ Fidler, David. "SARS, Governance and the Globalization of Disease". Palgrave Macmillan. 2004. pg. 129.

⁶⁹ "Another Failure for Taiwan Separatists" *People's Daily*, May 21, 2003.

http://english.peopledaily.com.cn/200305/21/eng20030521_116997.shtml

⁷⁰ Ibid.

⁷¹ Fidler, David "Germs, governance, and global public health in the wake of SARS" *The Journal of Clinical Investigation*. Volume 113, Number 6, March 2004. Pg. 801.

Chinese government made any efforts on the part of the WHO efforts to visit the affected areas very difficult. In fact, China initially refused to notify the WHO of suspected and confirmed SARS cases in a timely, transparent, and verifiable manner. Although not technically legally bound to report such cases, under the conditions laid out in the WHO's International Health Regulations (of which China is a bound member), China was the only state that failed to do so⁷². All other states reported cases of SARS quickly and professionally – except China – and their failing to do so in the midst of an international pandemic was nothing short of barbaric. Unfortunately for China, viruses are notorious for not respecting the sovereignty of nations, of failing to recognize borders, and for wholly ignoring the political wishes of any government.

4.3. THE GOOD

It is not a stretch to assert that the rate of SARS was accelerated forward by inactions of the Chinese government, but it was also brought under control by a reversal of such behaviour by the same group. The wisdom that China eventually exhibited not only brought SARS to a halt, but has also left a legacy in its wake of transparency, improved health standards and renewed faith in the government's various political apparatuses. Although many such incidences have been commented on in this paper, it should be again underlined that following the April 20th turn-around, the mood in China was a wholly new one, and continued to be so thereafter. SARS lay bare the dangers of weak mechanisms for institutional coordination and information sharing across a fragmented central government and a highly autonomous set of local authorities, and since 2003 China has responded by appropriate and sincere changes. The high costs to China's reputation by failing to cooperate with the WHO in a time of crisis will not soon be forgotten by China's leaders. China's ruling elite have finally succumb to the notion that the people have a right to know, and that an improved level of transparency is tantamount for China's future ambitions.

The previously mentioned institutional changes in terms of top party officials are nothing to be under-estimated. In a political system controlled by allegiances to specific people, the act of removing two top politburo members and replacing them with competent leaders has not been seen in China since the notorious removal of the "gang of four" in 1976. This has further strengthened Hu's support and allowed the current government to continue their bold push towards economic and social reform targeted at improving the lives of those most negatively affected by China's decades of growth.

⁷² Fidler, David "Germs, governance, and global public health in the wake of SARS" *The Journal of Clinical Investigation*. Volume 113, Number 6, March 2004. Pg. 801.

The fact is that China took clear, decisive, and fruitful actions in order to stop SARS. Authorities in areas where outbreaks were occurring responded to SARS with mass public education campaigns and encouraged populations to conduct daily fever checks⁷³. Authorities all over China opened hundreds of clinics where suspected SARS cases were triaged. And SARS related development decisions did not stop with the disease. Throughout 2004, a country-wide first-aid network was re-established – which included bringing back a co-operative medical care system in rural areas. Under this system, the government pays 10 Yuan (roughly 1 Euro) a year for each individual farmer willing to join the scheme, and the farmer puts in the same amount. By mid-2004, the pilot scheme covered 69 million farmers, who represent about 10 percent of the national total⁷⁴. The experience of SARS also prompted the government to launch a \$1 billion programme designed to improve the country’s readiness for future epidemic outbreaks. The programme includes a better reporting system and the founding of a centre for disease control⁷⁵.

Other measures have signalled China’s sincere willingness to take disease control seriously – on May 9th, 2003, the State Council issued a new regulation on Public Health Emergency Response to strengthen surveillance and in August of 2004, the National Law on Communicable Diseases Prevention and Control was revised⁷⁶. Both of these changes were clearly motivated from China’s SARS experience. Beyond investments, policies and announcements, China relied on what it does best to push its way through crisis: mass mobilization. In Guangxi Province, minority groups sang folk songs about SARS, while in Inner Mongolia, huge murals showing aspects of the SARS experience covered buildings in the city centre. Provinces like Yunnan announced themselves “closed for tourism”, while in others like Hebei, villagers set up roadblocks at commuter entrances; effectively creating their own mini SARS Great Walls. This mobilization, an age-old art in China, successfully achieved both action, and the spread of verified information – and within 2 months, China was declared “SARS-free”⁷⁷.

⁷³ “The World Health Report, 2003: Shaping the Future” A World Health Organization Publication. 2003. Pg. 78.

⁷⁴ Xiong Lei “How Sars could save a nation” *NewStatesman*. January 1, 2005.

⁷⁵ Clive Cookson “Sars legacy is blueprint for action on new diseases” *Financial Times*. July 30, 2005.

⁷⁶ Balasegaram, and Schnur “China: from denial to mass mobilization” *SARS: How a global epidemic was stopped*. WHO Publications. 2006. pg 84

⁷⁷ *Ibid*. Pg. 83.

5. THE RESULTS

“SARS, for all the fear and suffering it caused, has left public-health systems greatly improved”⁷⁸

- Dr. Shigeru Omi. WHO Regional Director.

It is the direct prerogative of this paper to argue one simple truth: that the experience of SARS has left China improved in all areas – health and sanitation, financial security, overseas investment confidence, political transparency, and government responsibility. SARS was the battle that China needed the most – it garnered international sympathy and understanding for the Chinese government, while simultaneously allowed them to revive dated political systems to mobilize the people and educate them on a scale not seen in decades. And, most importantly, in the relative blink of an eye, the state of China’s basic health and sanitation was propelled forward by decades, if not centuries.

When I decided to initially research SARS, my gut feeling about the disease was that the experience for China was a good one. This was in early 2004, when the Avian bird-flu was beginning to grip the world in much the same way as SARS had. In the previous few years, citizens around the world were trying to explain this new world era characterised by the September 11th terrorist attack, the invasion of Iraq, the war in Afghanistan, anthrax scares, SARS, and the bird-flu. The streams of critical theory mentality were running rampant – the world was falling apart and anything and everything to do with “globalization” was surely to blame. Cracks had opened due to the new movement of goods, services and ideas around the globe, and from these cracks one felt that an apocalypse was emerging.

One only needs to look at titles of the earliest publications that came out on SARS. Books such as “SARS War: Combating the Disease”, “The SARS Epidemic: Challenges to China’s Crisis Management”, and “The New Global Threat”. The titles of more recent publications tell a different story, such as the WHO’s very recent publication “SARS: How a global epidemic was stopped”. Critical theorists argue that progress and development need to be carefully scrutinized in order to avoid a situation of “too much, too fast” – and are quick to declare the sky is falling modern day challenges are connected to global forces. Well, the fact of the matter is that everything around us is interlinked on a global level, and if salvation is to be found for our modern day woes, then they will surely be global in nature as well. Yes, SARS was a very global crisis that

⁷⁸ Omi, Shigeru. Overview from “SARS: How a global epidemic was stopped” *World Health Organization*. 2006. Pg VIII

was spread around the world via forces of globalization that have made the movements of goods and people easier than ever before. But the disease was identified, understood, and stopped at a pace never thought possible – thanks to those same global mechanisms.

The lessons to be learned from SARS are measures that can be applied at both local and global levels. Firstly – international actors must insist on timely and transparent reports of situations that cause alarm. Not only in the arena health, but in respect to public security in general. Secondly, the dissemination of information must be swift, accurate and global. Technologies such as websites and emails must be harnessed in the face of future global challenges. A third lesson stems from the success of the level of international collaboration that characterised the eventual control of SARS. The scientific and medical community put aside their competitive ambitions and worked together to stave off an international disaster. Participation must be open and accessible so all groups concerned do not fear lack of access to life and death information. And finally, international collaboration and cooperation must be backed by local political will. Governments must refrain from interfering in the affairs of groups whose mandate is to help those around them.

This research argued that SARS was a good thing. It left behind improved health systems, more educated masses and improved mediums of communication. And if this argument is convincing, one question will surely remain: How was it that SARS was able to grip the world in a state of fear and frenzy? SARS was not a disease that feasted on the sick, but a situation that thrived in a crumbling system. It was a giant sized warning which the world feared would go unheard. The warning was that the time of protecting borders in the face of environmental, health, refugee, drug and other soft threats is folly. Germs don't recognise borders. And, those most concerned with the SARS outbreak are concerned that the SARS warning will go unheard.

SARS was the first disease of the 21st century. It will not be the last. It attacked areas we thought were impervious – rich, urban, developed locations with an extraordinary access to experts and information. Had SARS gained a foothold in areas less well-equipped the results could have easily reached far more catastrophic levels. We must realise that global progression and development is not a force we have any choice over, but we do have a choice to embrace the benefits of new global forces in an attempt to face global challenges.

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